

### **Amendment**

1. (Currently Amended) A method for scanning a surface comprising:  
generating a light beam and delivering the beam to a surface;  
detecting a response of the surface to the light beam with a  
detector;  
moving reciprocating the light beam and surface with respect to  
one another with a voice coil at a relative speed; and  
modulating a sample period based on said relative speed.
2. (Cancel)
3. (Currently Amended) A method according to claim 1 2 wherein the  
relative speed is 1m/s.
4. (Currently Amended) A method according to claim 1 2 wherein the  
reciprocating provided by the voice coil occurs along one axis of a raster.
5. (Currently Amended) A method according to claim 1 2 wherein the  
reciprocating takes place under a focused light beam.
6. (Currently Amended) A method according to claim 1 2 wherein the  
surface is a surface of an array of biochemicals.
7. (Original) A method according to claim 6 wherein the array of  
chemicals is a DNA chip.

8. (Original) A method according to claim 6 wherein the reciprocating is provided by the voice coil which is coupled between a carrier holding the array and a support.

9. (Original) A method according to claim 6 wherein the reciprocating is provided by the voice coil which is coupled to move a lens through which the light beam is delivered.

10. (Currently Amended) A method according to claim 2 1 additionally comprising compensating for variable integral illumination per sample.

11. (Original) The method of claim 11 wherein the compensating comprises scaling amplitude of a measured signal by function of the ratio of an actual sample period to a nominal sample period.

12. (Original) A method for scanning a surface comprising:  
generating a light beam and delivering the beam to a surface of an array of chemicals;  
detecting a response of the surface to the light beam with a detector;  
reciprocating the light beam and surface with respect to one another at a relative speed; and  
compensating for variable integral illumination per detected data sample of the response.

~~wherein a voice coil provides the reciprocating.~~

13. (Currently Amended) An apparatus for scanning a surface of a chemical array comprising:  
a detector for detecting an optical signal from the surface;  
a carrier to support the surface, wherein the detector or the carrier moves with respect to the other at a relative speed;

**a control system that modulates the sample period based on said relative speed; and**

a voice coil to cause the moving of the detector or carrier with respect to the other.

14. (Original) An apparatus according to claim 13 wherein the voice coil is connected to move the detector.

15. (Original) An apparatus according to claim 13 wherein the voice coil is connected to move the carrier.

16. (Original) An apparatus according to claim 13 additionally comprising an optical system to generate a light beam and to deliver the beam to the surface.

17. (Original) An apparatus according to claim 16 wherein the optical system includes a lens through which the light beam is delivered to the surface.

18. (Original) An apparatus according to claim 16 wherein the voice coil is connected to move the lens.

19. (Original) An apparatus according to claim 13 wherein the voice coil moves the detector or the carrier moves with respect to the other at a speed of 1m/s.

20. (Original) An apparatus according to claim 13 wherein the movement provided by the voice coil comprises a reciprocating movement which occurs along one axis of a raster.

21. (Original) An apparatus according to claim 17 wherein the optical system delivers a focused light beam to the surface.

22. (New) A method for scanning a surface comprising:
- generating a light beam and delivering the beam to a surface;
  - detecting a response of the surface to the light beam with a detector;
  - moving the light beam and surface with respect to one another at a relative speed;
  - modulating a sample period based on said relative speed; and
  - compensating for variable integral illumination per sample.